

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

UNITED STATES OF AMERICA,)

)

)

v.)

CRIMINAL No. 95-21-B

)

RINALDO TICCHIARELLI,)

BRADLEY OLIVER BOWEN and)

DIANA PIERCE,)

)

DEFENDANTS)

**ORDER DETERMINING THE NATURE OF THE
CONTROLLED SUBSTANCE FOR
PURPOSES OF SENTENCING**

These three defendants have pleaded guilty to (Ticchiarelli and Pierce) or been found guilty of (Bowen) trafficking in a controlled substance. The sentencing issue common to them, and the limited issue on which the cases are consolidated, is what to denominate that substance under the Sentencing Guidelines. I conducted an evidentiary hearing at which experts testified on August 9, 1996.

All the experts agree (or do not disagree) on the following physical characteristics of the substance: it is derived from the cannabis sativa (marijuana) plant; it has a strong odor; it is a black or near-black tarry substance rather like road tar; it is not a solid, but it does not pour unless heated; it originates in Jamaica; it contains tetrahydrocannabinol (THC) in the thirteen to sixteen percent

range as well as cannabinol and cannabidiol; it contains no visible fragments of vegetation, but under a microscope transparent cells can be observed that one expert believes come from the plant's glandular hairs and that he believes can be felt as a residue on the fingers if one rubs the substance between the fingers; it contains no cystolithic hairs; it contains chlorophyll and magnesium.¹

There are four possible sentencing classifications for a substance deriving from the cannabis sativa plant: marijuana; hashish; hashish oil; or tetrahydrocannabinol, organic and synthetic—in ascending order of seriousness for guideline sentencing calculations. See United States Sentencing Commission, Guidelines Manual, § 2D1.1, Drug Equivalency Tables, at 91, 93 (Nov. 1995). Tetrahydrocannabinol is not applicable to this case, and the parties all agree that the substance here

¹ After the hearing, both the prosecution and the defendants attached material to their legal memoranda that seems to be evidence that should have been offered at the hearing where it could have been challenged as opposed to the kinds of definitional material of which I can take judicial notice. For that reason I do not rely upon the reports of Dr. Don Roach presented by the defendants. I also do not rely upon internal DEA memoranda that the government has submitted. These memoranda apparently were drafted with a view to presenting the government's position to the Sentencing Commission on drafting a guideline definition. Neither do I rely upon the testimony presented at the trial of United States v. Saile, No. 94-6046-CR (S.D. Fla. Mar. 8, 1996). In any event, none of these materials would change the conclusion that I reach here. With respect to Dr. Roach's assertion that the substance cannot qualify as hashish oil because, among other reasons, it is a paste, not an oil, and because it contains chlorophyll, I make these observations: The substance in question has been around for many, many months and is subject to drying out as observed by other experts; the word "oil" in a phrase used by drug smugglers and drug agents does not have to bear the scientific meaning Dr. Roach asserts of something that is liquid at room temperature; and finally, the presence of chlorophyll indicating that the source of the substance includes the leaves of the cannabis sativa plant as well as the flowering tops is not inconsistent with the broader definition of hashish oil that has been used frequently as described later in the text of this opinion. Dr. Roach says in his letter to the defendants' lawyer that under a microscope he discovered a portion of what he believes to be a cystolithic hair, something that looks like pollen and part of a leaf. None of the experts at the hearing testified to having observed any such plant material. In any event, the fact that two or three impurities remained is not enough to change the nature of the substance.

is not hashish, which they agree comes from the flowering tops of the plant.² This substance, in contrast, is derived from a variety of plant debris from *cannabis sativa*.³

The defendants argue that the term “hashish oil” should be limited to a high potency cannabis substance (THC levels of twenty to fifty percent or higher) that is a non-viscous, pourable oil derived from crushing the flowering tops of *cannabis sativa*. They say that it is transparent and honey-colored with an odor like cedar and pepper and originates primarily in countries from the

² “Hashish” is variously defined as a drug formed from the resin scraped from the flowering top of the cannabis plant, *Black’s Law Dictionary* 718 (6th ed. 1990); Partial Tr. of Proceedings, at 38 (testimony of defendants’ expert Dr. James Woodford), or, alternatively, from any part of the plant. Va. Code Ann. § 54-524.2 (16) (Michie 1974); Gary J. Miller, *Drugs and the Law* 403-04 (1992).

³ The defendants argue both through their experts and directly that the substance here is a variety of so-called Jamaican Black. They refer to a description of “Jamaican Black” by British researchers who examined British Customs seizures of cannabis products in the 1984-89 period and reported as follows:

In an addition to herbal cannabis, a different product known to originate in Jamaica has been seen. The material has the appearance of a roughly made resinous-type of material but the cannabinoid profile is the same as that of Jamaican cannabis. It is unlikely that any significant quantity, if any, of cannabis resin could be physically extracted from plants grown in Jamaica or the West Indies as the rainfall in this area is too high to allow the plants to produce extractable quantities of resin. Resin production remains located within the “cannabis resin belt” stretching from Morocco through the Middle-east to the northern part of the Indian subcontinent. In the “resin” from Jamaica, however, all macroscopic herbal characteristics have been destroyed; microscopically it has no features that suggest it to be made from either herbal cannabis or cannabis resin. It is not sticky, odorous, or pliable in the way that, for example, cannabis resin from Pakistan is. Although it has the same cannabinoid profile as herb from Jamaica, the actual level of cannabinoids varies greatly (i.e. the THC content can be from less than 1% to greater than 5% by weight). It is not known exactly how it is made: one explanation is that after the best of the herbal cannabis has been harvested the residue is processed to give a material that could be mistaken for cannabis resin. This treatment may involve the herbal cannabis being chopped and compressed into blocks, possibly with water being present to assist the processing. Such a product would probably have a higher illicit market value than low quality herb. In the UK it has been colloquially referred to as “Jamaican Black”.

J.E. Pitts, P.J. O’Neil and K.P. Leggo, *Variation in the THC Content of Illicitly Imported Cannabis Products—1984-1989*, 42 J. Pharm. Pharmacol. 817, 819 (1990) (The term “cannabis” in the article heading is footnoted and the footnote defines it as follows: “*Cannabis=cannabis sativa* L.; cannabis=marijuana; cannabis resin=hashish; liquid cannabis=cannabis oil or ‘hash oil’.”). Regardless of whether this substance fits within the colloquial term “Jamaican Black,” I conclude nevertheless that it is hashish oil for statutory and Guideline purposes for the reasons set forth in the text of this opinion.

Mediterranean to India. The Government argues that the term “hashish oil” covers any concentrated marijuana extract (regardless of its country of origin) that is not a solid, with the plant material—and specifically the cystolithic hairs—filtered out; and that it is generally dark, viscous, odorous and sticky with a THC content of ten to thirty percent.

For federal law purposes, the term hashish oil first appeared in the United States Code in 1984 when Congress introduced it with a sentencing ratio of 50:1 compared to marijuana. Pub. L. No. 98-473, 98 Stat. 2030, 2068, 2070 (codified as amended at 21 U.S.C. § 841(b)(1)(D) (1994)). Congress did not define the term. The Sentencing Commission followed suit in 1988, replicating the sentencing ratio and likewise failing to define the term. See United States Sentencing Commission, Guidelines Manual, § 2D1.1, Drug Equivalency Tables, at 61, 67 (rev. ed. 1988). The Commission finally provided a definition in 1995, Guideline 2D1.1(c),⁴ but the defendants argue that the new definition is a change in the law and cannot constitutionally be applied to their conduct, which occurred before the definition was adopted. Because I cannot determine whether the new definition changed the previous law without determining first what that previous law amounted to, I proceed without regard to the new Guideline definition.

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Hashish oil, for the purposes of this guideline, means a preparation of the soluble cannabinoids derived from cannabis that includes (i) one or more of the tetrahydrocannabinols (as listed in 21 C.F.R. § 1308.11(d)(25)), (ii) at least two of the following: cannabinol, cannabidiol, or cannabichromene, and (iii) is essentially free of plant material (e.g., plant fragments). Typically, hashish oil is a viscous, dark colored oil, but it can vary from a dry resin to a colorless liquid.

United States Sentencing Commission, Guidelines Manual, § 2D1.1(c), Drug Quantity Table, note (J), at 82, 88 (Nov. 1995).

The three experts presented by the parties were as deficient on the subject of definitions as Congress and the Sentencing Commission. One government expert admitted candidly that there is no scientific definition for the term hashish oil. His definition came simply from his DEA training. The other government expert learned what the term meant from her supervisor during the course of her training. Neither government expert could point to any treatises or scientific articles or professionally accepted definition among chemists. The defendants' expert testified that his definition came from perusing books and periodicals some years ago at the government's marijuana farm library in Oxford, Mississippi, but he could not identify any of the literature.

I have found the following definitional materials from the parties' and my own research.

In 1975, well before Congress added the reference to hashish oil in the United States Code, Senator James Eastland said that hashish oil is "one of the most frightening drugs on the market today. At the average potency of 40 to 50% THC, an ounce of it is enough to intoxicate over 1,000 people. It is, moreover, very easy to prepare; and it is attractive to the traffickers, additionally, because it is so easily concealed and because they can get so high a return for it." Hearing Before the Subcomm. to Investigate the Administration of the Internal Security Act and Other Internal Security Laws of the Senate Comm. on the Judiciary, 94th Cong., 1st Sess. part 2, at vi (1975).

Merriam-Webster's word repository provides published uses of the term. The references from their files that provide descriptions of hashish oil are as follows:

The brothers were dealing in hash oil, Burke said, "now the hottest new commodity on the international market. It is a distillation of hash where they use 180 proof alcohol in boiling it down and then come up with what they refer to as the essence of hashish. Your normal hashish has a THC [tetrahydrocannabinol] [sic]—which is the basic ingredient of the marijuana plant— content of between eight and 12 percent, and the liquid hashish oil has a THC count of 58

percent. A tiny drop onto a regular filter cigarette can knock you out.” Joe Eszterhas, The Strange Case of the Hippie Mafia, Rolling Stone Mag., Dec. 21, 1972, at 3.

There was a big increase in a new type of cannabis known as “hash oil” or “liquid cannabis” which is made by distilling resin to produce a black, sticky molasses-type fluid. The Guardian (London), Dec. 31, 1973, at 5.

There was a big increase in smuggling of a new type of cannabis first found in 1972. It is known as “hash oil” or liquid cannabis, and is made by distilling resin to produce a black, sticky molasses-type fluid which is easily concealed in travellers’ baggage, in plastic cosmetic bottles, toothpaste tubes and aerospray [sic] containers. . . . The liquid is at least 20 times more potent than resin and sells at £7,000 a pound. After delivery it is diluted until it pours like water and cigarettes are soaked in the fluid. £8m of Cannabis Seized this Year, The Times (London), Dec. 2, 1973, at 2.

A 1974 Drug Enforcement Administration (“DEA”) publication includes a picture of pouring hashish oil and states in the caption:

Tetrahydrocannabinol (THC) is the active ingredient of marihuana as well as this dark, viscous substance, known as liquid hashish or hashish oil. The THC content of most marihuana in the United States is between 0.5 percent and 2 percent; the THC content of liquid hashish normally ranges from 20 to 65 percent. The concentrate serves to reduce the risks of the smuggler, while compounding those of the consumer.

DEA, U.S. Dep’t of Justice, The Cannabis Controversy, Drug Enforcement, at 27 (Fall 1974).

In 1975, a DEA publication stated: “A concentrate of cannabis, hashish oil is produced by a process of repeated extraction to yield a dark, viscous liquid, samples of which have been found to contain from 20 to 60 percent THC. A drop or two of this liquid on a cigarette is equal in psychoactive effect to an entire marihuana cigarette.” John H. Langer, et al., Drugs of Abuse, 2:2 Drug Enforcement 27 (1975).

In 1976, Virginia statutes added a reference to hashish oil and defined it as “any oily extract containing one or more cannabinoids, but shall not include any such extract with a tetrahydrocannabinol content of less than fifteen percent.” Va. Code Ann. § 54-524.2 (16) (Michie 1976 cum. supp.). It also stated that “some trade or other names” for hashish oil were “hash oil; liquid marijuana; liquid hashish.” § 54-524.84:4 (18). In 1982, Virginia reduced the minimum THC content to twelve percent. § 54-524.2 (16) (Michie 1982).

The Second Barnhart Dictionary of New English, published in 1980, defines “hash oil or hashish oil” as “tetrahydrocannabinol (THC), the active ingredient of marijuana and hashish,” attributes its origins to the year 1972 and says that it is “so called because of its resemblance to motor oil.” The Second Barnhart Dictionary of New English 234 (1980).

In 1982, Alaska statutes added a reference to hashish oil and defined it as “the viscous liquid concentrate of tetrahydrocannabinols extracted from the plant (genus) *Cannabis*.” Alaska Stat. § 11.71.900 (11) (1982).

In 1987-88, Professors Rudolf Brenneisen and Mahmoud A. ElSohly characterized the drugs as follows: “Herbal *Cannabis* (*Cannabis* marijuana), *Cannabis* resin (hashish), and extracts of *Cannabis* resin (hashish oil) are still the most abused illicit drugs of the world.” Rudolf Brenneisen & Mahmoud A. ElSohly, Chromatographic and Spectroscopic Profiles of *Cannabis* of Different Origins: Part 1, 33:6 J. Forensic Sci. 1385, 1385 (1988).

In 1984, the book Marihuana in Science and Medicine stated: “In the 1960s, a concentrated form of THC, hashish oil (40% THC), appeared on the illicit market.” One table in the book refers to the concentrations range as ten to thirty percent and in parentheses states up to sixty percent. Gabriel G. Nahas, Marihuana in Science and Medicine 15, 31 (1984).

In Drugs of Abuse, 1988 edition, that DEA publication states under the heading “Hashish Oil”:

The name is used by illicit drug users and dealers but is a misnomer in suggesting any resemblance to hashish other than its objective of further concentration. Hashish oil is produced by a process of repeated extraction of cannabis plant materials to yield a dark viscous liquid, current samples of which average about 20 percent THC. In terms of its psychoactive effect, a drop or two of this liquid on a cigarette is equal to a single “joint” of marijuana.

DEA, U.S. Dep’t of Justice, Drugs of Abuse 45-46 (1988).⁵

In Intelligence Trends, a 1989 DEA publication, the following is stated under the heading “Hashish Oil”:

Hashish oil or liquid cannabis is a dark viscous oil with a characteristic odor, generally that of an organic solvent. When diluted with organic solvents, cannabis becomes either a green or brown solution. The color is not necessarily an indication of origin because the maturity of the plant material and the solvent used to prepare the liquid cannabis usually dictate its color.

The traditional major producing regions of liquid cannabis are the hashish resin-producing countries of the Mediterranean and of the Indian Subcontinent, and the herbal cannabis-producing Caribbean. Generally, hashish oil seized in the United States originates in Jamaica.

Commonly used street terms for hashish oil are hash oil, honey oil, shish oil, and marijuana oil. Because hashish oil is produced by repeated extraction of cannabis plant material or by a distillation process, it has a relatively high THC content. Of the 327 samples analyzed through September 1988 by the University of Mississippi, the highest concentration of THC was 43.18 percent, while the average was 17 percent. Hashish oil is frequently used with cigarettes. A drop or two is placed on a cigarette and smoked.

⁵ Senator John Breaux entered a report into the Congressional Record on June 13, 1988, paraphrasing this statement. See 134 Cong. Rec. S7675 (daily ed. June 13, 1988).

Potency

Internationally the THC levels of hashish oil generally compare to those of other cannabis by-products as follows:

Herbal cannabis (marijuana)	0.5	—	5%	
Resin cannabis (hashish)		2	—	10%
Liquid cannabis (hashish oil)	10	—	30%	

Production

Jamaican hashish oil production largely makes use of unmarketable plant material: the stems, stalks and debris. Accordingly, it does not use significant quantities of exportable marijuana. Hashish oil is typically produced at remote sites in a makeshift percolator, usually consisting of a 55-gallon drum placed over an open fire. The drug contains cannabis plant material along with a quantity of organic solvent such as acetone, alcohol, or ether. The process requires constant heating for as long as three days while most of the solvent boils away.

DEA, U.S. Dep't of Justice, 16:3 Intelligence Trends 25 (1989).

In Drugs and the Law, a 1992 book cited by the defendants, Gary J. Miller asserts:

Sometimes called “Marijuana Oil” or “Honey Oil,” hashish oil is legally considered “concentrated cannabis.” This substance is an illicitly manufactured form of what was formerly known in the pharmaceutical and medical professions as Tincture or Extract of Cannabis, a lawful product once used for medicinal purposes. Although the medical preparations of Cannabis Sativa L. were restricted in this county in 1937, marijuana and hashish continued to flourish. Interestingly enough, hash oil all but disappeared until the early 1970s when it cropped up in the Orange County area of Southern California. It soon spread throughout the state and is, today, a much used and desired drug. In general, hash oil is about 3 to 4 times stronger than hashish and 30 to 40 times stronger than “commercial grade marijuana.”

Hashish oil is produced by a process of repeated extraction of cannabis plant materials to yield a dark, viscous liquid. It varies in color, but can generally be found in amber, dark green, brown, or black. It has an average strength of between 20 to 60 percent THC,

which makes it the closest thing to pure THC found on the street today. . . .

Most users smoke hash oil by adding it to a marijuana cigarette or a commercial cigarette. Some users have reported taking hash oil by mouth, or by adding it to food preparations or liquids such as hot teas. Due to its consistency and the presence of solvents or other chemicals used in its extraction process, hash oil must be preserved in some airtight container and should be kept away from light and heat. The air, heat, and light will cause the oil to harden.

Gary J. Miller, Drugs and the Law 404-05 (1992).

What is apparent from all this is that, indeed, there is no scientific nor any universally accepted precise definition of the term hashish oil and there has been over the years substantial variation in the potency of cannabis-derived substances. There is general agreement, however, that hashish oil is derived from the cannabis sativa plant; it is not a solid; it has higher THC levels than ordinary marijuana vegetation materials; and it is prepared through some kind of distillation process.

What does all this mean for sentencing purposes? Neither Congress nor the Sentencing Commission is required to have a scientific definition before penalizing trafficking in a substance. After all, illegal drug trafficking is not a scientific enterprise, its participants are not usually scientists, and penalties are not to be avoided by processing or regional plant material variations associated with clandestine enterprises. All the law requires is that defendants be able reasonably to predict from the law the illegality and seriousness of their offense: “The person of ordinary intelligence . . . should not have to guess at the meaning of penalty provisions, or else those provisions are not sufficiently clear to satisfy due process concerns.” United States v. Colon-Ortiz, 866 F.2d 6, 9 (1st Cir.), cert. denied, 490 U.S. 1051 (1989). “[V]ague sentencing provisions may

pose constitutional questions if they do not state with sufficient clarity the consequences of violating a given criminal statute.” United States v. Batchelder, 442 U.S. 114, 123 (1979) (citations omitted).

But few words possess the precision of mathematical symbols, most statutes must deal with untold and unforeseen variations in factual situations, and the practical necessities of discharging the business of government inevitably limit the specificity with which legislators can spell out prohibitions. Consequently, no more than a reasonable degree of certainty can be demanded. Nor is it unfair to require that one who deliberately goes perilously close to an area of proscribed conduct shall take the risk that he may cross the line.

Boyce Motor Lines, Inc. v. United States, 342 U.S. 337, 340 (1952) (footnote omitted). Illegality here is undisputed. The only questions are whether the term “hashish oil” encompasses this substance and whether these defendants reasonably could be expected to know from Congress’s and the Commission’s use of the terms that they were dealing in a substance that carried more severe consequences than marijuana. The answer, unequivocally, is “yes.”

This substance is not ordinary unprocessed marijuana, and no one could mistake it as such. That much appears to be undisputed. It has been through a concentrating process and people handling it could see that they were not dealing with ordinary marijuana vegetation. Instead, all visible traces of vegetation had been extracted in the process. It had been converted to a nonsolid, tar-like substance, unlike marijuana, that could be poured if heated or diluted. Although the potency was not as high as some hashish oils, its was greater than most ordinary marijuana, above the minimum for hashish oil under the Virginia statute and in the middle of the range for hashish oil described by the 1989 DEA publication.⁶ Its color and texture were well within many of the

⁶ The defendants focus most of their argument on the assertedly low potency of this substance as contrasted with the numbers that concerned Senator Eastland and others. The *actual* potency, however, is not determinative. Congress and the Commission must deal in general categories; drug traffickers themselves often do not have knowledge of the specific potency of a particular sample.

published descriptions of hashish oil. All these reasons persuade me both that the substance fits within the ordinary meaning of the term used by Congress and the Commission when they created a higher penalty for hashish oil and that these defendants were on reasonable notice that they were trafficking not in ordinary marijuana materials, but in the more serious substance.⁷ As a result, the rule of lenity is not applicable.

I conclude, therefore, that the substance in question is hashish oil. I have read the other cases that have dealt with this issue,⁸ but I base my decision not on following or distinguishing those precedents, but on the facts and definitions I have set forth herein. I reach this conclusion without relying on the Guideline's new definition.

The Clerk's Office shall proceed to schedule sentencing before me for the defendant Bowen and before Chief Judge Carter for the defendants Ticchiarelli and Pierce.

⁷ At the Bowen trial at which I presided, there was testimony that the defendants themselves called this material hashish oil. I have not relied on that testimony, although it appears to me potentially highly relevant. At the hearing, I invited the government to address that factor in its legal memorandum, but it has failed to do so. The defendants other than Bowen, of course, were not present at the trial and arguably Bowen himself, who has maintained his innocence, had no reason at trial to cross-examine on the identity of the substance or what the participants called it.

⁸ United States v. Gravelle, 819 F. Supp. 1076, 1078-79 (S.D. Fla. 1993) (finding that this kind of substance is not hashish oil); United States v. Schultz, 810 F. Supp. 230, 234 (S.D. Ohio 1992) (same); United States v. Saile, No. 94-6046-CR (S.D. Fla. Mar. 8, 1996), Tr. of Sentence Hr'g, at 133-34 (finding that this kind of substance is hashish oil).

SO ORDERED.

DATED THIS 2ND DAY OF OCTOBER, 1996.

D. BROCK HORNBY
UNITED STATES DISTRICT JUDGE